Report Date: 03 Mar 2015

Summary Report for Individual Task 052-196-7110 Conduct Bridge Inspections Status: Approved

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Destruction Notice: None

Foreign Disclosure: FD5 - This product/publication has been reviewed by the product developers in coordination with the Fort Leonard Wood, MO 65473 foreign disclosure authority. This product is releasable to students from all requesting foreign countries without restrictions.

Condition: As a Leader in a field environment, given a bridge to inspect, sketch pad, paper pencil, clipboard, keel marker, inspection mirror, flashlight, pick-mattock, ice-pick, 300 ft measuring tape, appropriately sized ladders, digital camera, a completed DA Form 1249, **TM 5-600** *Bridge Inspection, Maintenance, and Repair;* and needed safety rigging and equipment for thebridge site. This task should not be trained in MOPP 4.

Standard: Complete the bridge inspection to provide guidance to the commander, for maintenance and repair of bridges to retain them in continuous readiness for support of military operation in accordance with **TM 5-600** *Bridge Inspection, Maintenance, and Repair*.

Special Condition: None

Safety Risk: Low

MOPP 4: Never

Task Statements

Cue: None

DANGER

None

WARNING

None

CAUTION

None

Remarks: Continuous, rigorous inspections are necessary for an effective maintenance program. It is recommended that inspections be made annually of all basic structures and more frequently for fenders and utilities. Additional inspections may be necessary under certain circumstances, such as a tsunami, high tides, earthquakes, accidents, typhoons, and heavy freezes. Inspections may be made from the structures, from a boat or float, or below the waterline by divers. Underwater television is often employed in visual inspections. Types of inspections typical to bridges are: Operator inspection consists of examination, lubrication, and minor adjustment performed by operators on a continuous basis.

Preventative maintenance inspection is the scheduled examination and minor repair of facilities and systems that would otherwise not be subject to inspection. Pier fender systems, fire protection systems, and under pier utilities are examples. Control inspection is the major scheduled examination of all components and systems on a periodic basis to determine and document the condition of the bridge and to generate major work required.

Maintenance. Maintenance is the recurrent day-to-day, periodic, or scheduled work that is required to preserve or restore a bridge to such a condition that it can be effectively utilized for its designed purpose. It includes work undertaken to prevent damage to or deterioration of a bridge that otherwise would be costly to restore. Several levels of bridge maintenance are practiced, depending on the complexity and frequency of the tasks involved. These tasks range from the clearing of drainpipes to the replacement of bearings. Minor maintenance consists of cleaning the drainage system, patch painting, removing debris, tightening loose bolts, and cleaning the joints. Routine maintenance includes adjusting bearings, complete repainting, repairing potholes, filling cracks, and sealing concrete.

Notes: While the sequence of inspection for will generally be the same as for bridges, exceptions may occur in the

following situations:
Hazards. Climbing and other hazardous tasks should be accomplished while the inspector is fully alert.
Weather. Wind, extreme temperatures, rain, or snow may force the postponement of hazardous activities such as

climbing, diving, or water-borne operations.

Traffic. Median barriers, decks, deck joints, traffic control devices, and approaches should be inspected in daylight during periods of relatively light traffic to ensure inspector safety and to avoid the disruption of traffic. Inspection party size. When the inspection party is large, several different tasks may be performed simultaneously by different inspectors or groups of inspectors.

Performance Steps

1. Receive the mission.
a. Plan the route.
b. Setup security at site.
Cue: Inspection sequence: For average bridges, of average length and complexity, it is convenient to conduct the inspection in the following sequence. 2. Inspect the bridge's substructure units:
a. Piles.
b. Fenders.
c. Scour protection.
d. Piers.
e. Abutments.
f. Skewbacks.
g. Anchorages.
h. Footings.
3. Inspect the bridge's superstructure units:
a. Main supporting members.
b. Bearings.
c. Secondary members and bracing.
d. Utilities.
e. Deck, including roadway and joints.
f. End dams.
g. Sidewalks and railings.
4. Inspect additional sections of the bridge:
a. Approaches.
b. Lighting.
c. Signing.

- d. Electrical.
- e. Barriers, gates, and other traffic control devices.
- f. Waterways.

(Asterisks indicates a leader performance step.)

Evaluation Guidance: Score the Soldier "GO" if all required steps are passed (P). Score the Soldier "NO-GO" if any required step is failed (F). If the Soldier fails any step, show the Soldier how to do it correctly.

Evaluation Preparation: Brief Soldier: Tell the soldier to complete a bridge inspection in accordance with TM 5-600.

PERFORMANCE MEASURES	GO	NO-GO	N/A
1. Received the mission.			
2. Inspected the bridge's substructure.			
3. Inspected the bridge's superstructure.			
4. Inspected additional sections of the bridge.			

Supporting Reference(s):

Step Number	Reference ID	Reference Name	Required	Primary
	DA FORM 1249	BRIDGE RECONNAISSANCE REPORT	Yes	No
		BRIDGE INSPECTION, MAINTENANCE, AND REPAIR {AFJPAM 32-1088}	Yes	No

Environment: Environmental protection is not just the law but the right thing to do. It is a continual process and starts with deliberate planning. Always be alert to ways to protect our environment during training and missions. In doing so, you will contribute to the sustainment of our training resources while protecting people and the environment from harmful effects. Refer to FM 3-34.5 Environmental Considerations and GTA 05-08-002 ENVIRONMENTAL-RELATED RISK ASSESSMENT.

Safety: In a training environment, leaders must perform a risk assessment in accordance with ATP 5-19, Risk Management. Leaders will complete the current Deliberate Risk Assessment Worksheet in accordance with the TRADOC Safety Officer during the planning and completion of each task and sub-task by assessing mission, enemy, terrain and weather, troops and support available-time available and civil considerations, (METT-TC). Note: During MOPP training, leaders must ensure personnel are monitored for potential heat injury. Local policies and procedures must be followed during times of increased heat category in order to avoid heat related injury. Consider the MOPP work/rest cycles and water replacement guidelines IAW FM 3-11.4, Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical (NBC) Protection, FM 3-11.5, Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Decontamination. Complete the Risk Management Process before conducting operations, or logistical activities. DD Form 2977 Deliberate Risk Assessment Worksheet, in accordance with ATP 5-19 Risk Management.

Prerequisite Individual Tasks:

Task Number	Title	Proponent	Status
052-196-7133	Prepare a Bridge Reconnaissance Report	052 - Engineer (Individual)	Analysis Completed

Supporting Individual Tasks:

Task Number	Title	Proponent	Status
052-196-7106	Conduct Engineer Reconnaissance Missions	052 - Engineer (Individual)	Analysis Completed

Supported Individual Tasks: None

Supported Collective Tasks: None